

# Development of an Instrument to Measure the Inclusive Classroom Climate

Nurhizrah Gistituati<sup>1</sup>, Hadiyanto<sup>1(\*)</sup>, Asep Ahmad Sopandi<sup>2</sup>, Grahita Kusumastuti<sup>2</sup>

<sup>1</sup>*Dep. of Education Administration, Faculty of Education, Universitas Negeri Padang, Indonesia*

<sup>2</sup>*Dep. of Special Education, Faculty of Education, Universitas Negeri Padang, Indonesia*

\*Corresponding author. Email: hadiyanto@fip.unp.ac.id

## ABSTRACT

This study aims to develop an inclusive classroom climate measuring tool in junior high school. The development of this study uses a mix method approach by performing two stages of research, namely theoretical framework and need assessment. The first step was conducted by literature study, reviewing relevant instruments and reference which support the development of the inclusive classrooms climate instrument. The second step was to need assessment through a survey where conducted in the field of inclusive classrooms. Students in inclusive classes were given questionnaires regarding what aspects should be present in an inclusive classroom climate instrument. Data collected were analyzed through a focus group discussion. A literature study about the inclusive classroom climate instrument is matched with the results of the survey and concluded. The results of this study indicate that there are ten aspects of the inclusive classroom climate instrument that are needed in the instrument for measuring inclusive classroom climate.

**Keywords:** *Instrument, inclusive, classroom climate*

## 1. INTRODUCTION

Inclusive education is a form of a non-discriminatory education service system. Indonesia is one country that supports the existence of inclusive education through inclusive school. One proof of Indonesia's support for inclusive education is with the approval of the world conference on inclusive education through Law No. 20 the Year 2003 article 5 paragraph (1) of the National Education System. As a continuation of laws, the government makes the Law No 8 the Year 2016 about disabilities. Law No. 8 the Year 2016 article 10 of the affirmed that the rights in Education for children with special needs includes the rights to get a decent education in the educational aspect for all kinds, paths, and levels of inclusive and special education. Through such legislation, students with special needs have the right to get an education with other students through inclusive school.

The inclusive school has a real impact on the students with special needs and the surrounding environment such as teachers, regular students, and families (Salend, 2011). The inclusive school has an impact in terms of academic and social for students with special needs. The academic achievement of students with special needs can be increased when they get a curriculum and many learning facilities in regular schools (Black-Hawkins, Florian, & Rouse, 2007). While in social terms, the results of research conclude that in general, the social, the behavior and the results of the self-concept of students with special needs in inclusive classrooms is better than students with special

needs in special classes (Salend & Garrick-Duhaney, 2007).

The changes of public schools into inclusive schools, add to the diversity of student characteristics with the presence of a child with special needs in inclusive schools. It also affects climate change class as a place of teaching and learning activities. Climate class is all situations that arise because of the interaction between teachers and learners, the relationship between the learners become the hallmark of a classroom affect the learning process in the classroom. Experts, about the climate, agree that the classroom climate is an environment of the intellectual, social, emotional and physical environment in which the learners learn (Brackett, Reyes, Rivers, Elbertson, & Salovey, 2011; Fraser, 2015).

The study of the classroom climate has been growing in America since 1979 and developed in other countries such as in Australia conducted by Fisher & Fraser (1982). From both experts about the organizational climate and the climate of that class, research about the classroom climate growing to other countries such as Spain, the Netherlands, Canada, Singapore, and the Philippines as well as Israel. The study of organizational climate, school climate and classroom climates in Indonesia has not been widely implemented and developed for the improvement of the quality of education. The study of the climate of the class conducted was still relatively simple, for examples such as that conducted by Sari (2016) dan Tarmidzi (2006). These studies implemented by students in the education level undergraduate, master's and doctoral for the completion of

their studies, as well as descriptive and correlational. The study implemented the use of measuring instruments classroom climate for the improvement of the quality of learning has started, unfortunately, the research has not been evenly implemented in all levels and types of education, especially for secondary schools.

Based on these explanations, the classroom climate affects the quality of education in a school. So, it is needed for measurement tools that can help determine the quality of education. However, in reality, measuring the climate of the inclusive classroom in Indonesia has not been developed. Therefore, this study in general aims to develop a tool measuring classroom climates in inclusive schools. More specifically, the purpose of this research is to produce instruments of the inclusive classroom climate in the inclusive junior high school in Padang.

**2. METHOD**

This research approach using a mixed-method. Qualitative data were collected through a literature study regarding the climate of the class. Articles about the climate class collected and analyzed regarding the aspects of what can be entered into the instrument the climate of inclusive classrooms. References have been collected reduced and concluded. The results of the study of literature are still in English then continue with forwarding translation, expert panels, as well as back-translation. The

quantitative data also collected by conducting a need assessment to forty students and teachers in junior high school which has inclusive class. The results of the qualitative and quantitative data were analyzed descriptively and concluded as an instrument inclusive classroom climate. Then conducted a validity and reliability test to five hundred students in the inclusive junior high school.

**3. RESULT AND DISCUSSION**

**The Development Aspects of Classroom Climate**

The instrument developed in this research is an instrument of the scale of the classroom climate that is developed based on ten aspects that were examined through the study of literature. Focus Group Discussion (FGD) was conducted to assess the literature that has been reviewed and decided aspects that will be used in developing the instrument. Aspects of the classroom climate were developed include a) physical environment, b) resource adequacy, c) a clear structure, d) meaningful communication, e) Attention and differentiation treatment, f) collaboration, g) influence h) participation, iii) responsibilities, and j) satisfaction. The tenth aspect is also chosen by teachers and students to be aspects that must exist in measuring the classroom climate. Here are the results of the opinions of teachers and students about aspects of inclusive classroom climate:

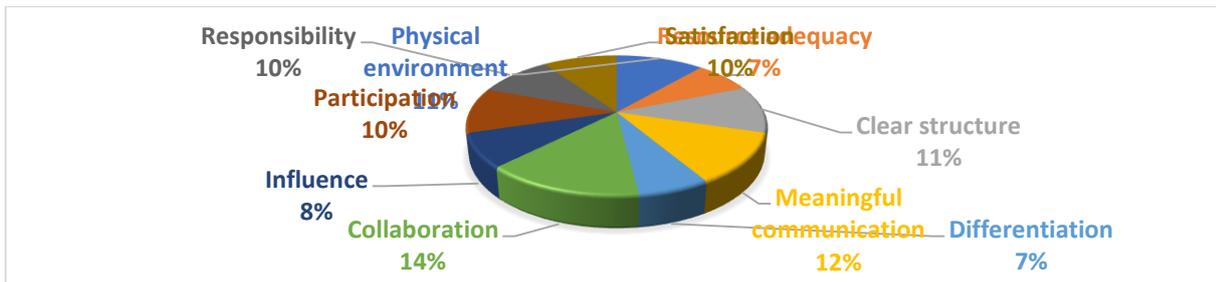


Figure 1. aspects of inclusive classroom climate

The ten aspects are then developed into fifty indicators as follows:

Table 1. The Development Aspects Of Climate Class

Aspect	Indicators
Physical environment	There's plenty space in the class
	It is easy to find things because the things are placed
	It is easy to access room because the school has good accessibility
	We make different things without disturbing each other
	We all can use the facilities
Resource adequacy	The school library includes an adequate selection of books and priodicals
	The supply of equipment and resources is adequate
	Instructional hardware and software are readily available and accessible
	Adequate duplicating facilities and services are available
	Facilities are adequate for catering a variety of classroom activities
Clear structure	It is possible to work without being disturbed
	We have rules for how to behave
	We are good listening to each other
	The teachers are helping me when Im having difficulties
	The teacher are good explaining what to do
Meaningful communication	We speak nicely to each other
	We talk about what's happening outside school

	Teachers tell us how to get better in reading and math
	Teacher avoid talking with each other about teaching and learning
	Teachers are good at making fun
Differentiation	We have varied materials and things to work with
	We can choose different task to work with
	We have plenty of time to do our work
	The class is made up of individuals who do not know each other well
	It is okay that we do differently in many things
Collaboration	We do project together
	We care for each other
	We are doing many things together in breaks/ after school
	We cal each other name in the classroom
	We support each other
<b>Aspect</b>	<b>Indicators</b>
Influence	We are involved in decisions about important issues
	We are involved in decisions about many issues
	The teacher are having time for us
	We make up many ideas that our teachers like
	We often talk with teachers about how we feel
Participation	Some of my peers feel welcome
	Everyone is feeling good
	We are talking mean about about each other in the classroom
	We all share experiences
	We include each other, e.g playing
Responsibility	We are responsible for what to do in the class
	We are responsible for our coping in reading/ math
	Students who break the rule are penalized
	We share responsibility for everyone’s feeling good in class
	The teachers rely on us
Satisfaction	The students enjoy their class work
	The members look forward to coming to class meetings
	After the class, the students have a sense of satisfaction
	Personal dissatisfaction with the class is to small to be a problem
	Students are well-satisfied with the work of the class

Based on these aspects, the measuring tool was made to measuring the classroom climate of the actual situation and measuring the expected classroom climate (preferred).  
Forward Translation

After the aspect classroom climate developed into a fifty-indicator, it performed the forward translation to translate the instrument from English to Bahasa.

Expert Panel – Back translation

The next step is the expert panel and the back translation. In the expert panel and the back translation, carried out the analysis of the results of the forward translation. The results of the forward translation do not show a difference in the meaning of each indicator. Based on this, performed a back-translation from Indonesian to English. The results of the back translation did not show significant differences from the translation of the beginning, so it can be concluded that the instrument can be continued to be validated.

Validity and Reliability

The results of development to forward-back translation was then tested for knowing validity and reliability. The measuring tool of classroom climate was given to five hundred students in junior high school. Data of the

measurement was calculated for validity and reliability by using Product Moment and Cronbach's Alpha and obtained the following results:

Table 2. The validity and Reliability of classroom climate instrument

No	Scale	Index	Validity		Reliability
			$\sum$ Valid Item	$\sum$ Failed Item	
1	Actual Form	0.174 - 0.639	50	0	0.899
2	Preferred Form	0.187 – 0.629	50	0	0.914

Based on the statistical analysis with Product Moment and Cronbach's Alpha, it is known that the validity of instruments for measuring classroom climates in inclusive school through the scale of the actual form have valid items as much as 50 grains. Fifty grains represent indicators of the scale of the inclusive classroom climate. While the level of instrument reliability of 0.899 belongs to the high category so that the actual instrument is reliable.

The validity of the instrument to measure the inclusive classroom climate that is expected (preferred form) has valid items as much as 50-grain items. Fifty items have been representing aspects of the classroom climate so it can be used to measure the classroom climate in inclusive schools. While the level of reliability of the instrument by 0,914 belongs to the category of high so the instrument is reliable.

Based on the results of the research, it is known that the classroom climate instrument which is developed to measure the climate of the inclusive classroom has ten aspects that developed into fifty indicators. Ten aspects of the inclusive classroom climate are appropriate with the dimensions in a classroom climate. To measure the physical environment and the social in the classroom, experts generally refer to three dimensions of organizational climate (Moos, 1979), namely the dimensions of the relationship, the dimensions of personal growth and development and dimensional system maintenance and change. However, because of the climate also is a combination with the environment, Hadiyanto (2016) adds one more dimension of Arter (1989) as development of the dimensions of Moos, namely the dimensions of the physical environment. It is also due to the physical environment better be the expectations on each classroom climate (Hadiyanto & Pransiska, 2018). The dimensions of the relationship related to the involvement of learners in the class, support each other and help, the expression ability of students. The first dimension includes affective interaction aspect between learners with learners and between learners with the teacher. The scales included in this dimension such as Apathy, Cliquesness, Cohesiveness, Favouritism, Friction, and Satisfaction.

The dimensions of the growth/personal development, or dimensions of the goal-oriented organization related to the purpose of the main class to improve growth, development as well as self-motivated learners. Scales of this dimensions such as Competitiveness, Difficulty, and Speed. The next dimension is the dimension of changes and improvements to the system which talk about the atmosphere to support hope, fix the controls and respond to changes. Among the scales associated with this dimension is a Democracy, Disorganization, Diversity, Formality, Goal Direction, and the Material Environment. The next dimension is the dimension of the physical environment associated with the completeness of the sources, comfort as well as security classes. The scales associated with this dimension, are the completeness of the source, security, as well as the regularity of the environment.

#### 4. CONCLUSION

Based on the results and discussion, it can be concluded that the development of an inclusive classroom climate has been suitable for the dimensions of the classroom climate. Instrument assessment of the climate of the inclusive classroom has the ten aspects of the climate that developed in fifty indicators that valid and reliable to

measure the climate of an inclusive classroom.

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